

Lewis Structures Sheet

Complete the following table. You will not be able to complete this all at once.

Name/ Formula	Lewis Structure	Polar Bonds in Molecule? If so, which ones?	Polar Molecule (Y/N)	# bonding pairs of e ⁻ on central atom	# non-bonding e ⁻ pairs on central atom	Molecular Geometry	Hybridization	# of σ-bonds	# of π-bonds
H ₂ S			Y	2	2	Bent	sp ³	2	0
BeF ₂			N	2	0	linear	sp	2	0
SCN ⁻			non	4	0	linear	sp	2	2
BF ₃			N	3	0	tri planar	sp ²	3	0

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PCl ₃		y 	y	3	1	trig pyr	sp ³	3	0
SiF ₆ ²⁻		y 	lon	6	0	oct	d ² sp ³	6	0
SF ₄		y 	y	4	1	See Saw	dsp ³	4	0
ClO ₃ ⁻			lon	5	1	trig pyr	d ² sp	3	2

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BrF ₃		y 	y	3	2	T Shape	dsp ³	3	0
CH ₃ COOH		y 	y	CH ₃ 4 C 4 O 2	0 0 0	tetrahedral tri planar Bent	sp ³ sp ² sp ³	4 3 2	0 1 0
CO ₂		y 	N	4	0	linear	sp	2	2
NCl ₃		No = e ⁻ neg	y	3	1	trig pyra	sp ³	3	0

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CH ₃ OH			y	C-4 O-2	0 2	tetrahedral Bent	sp ³ sp ³	4 2	0 0
ClF ₂ ⁺			ion	2	2	Bent	sp ³	2	0
CS ₂			N	4	0	linear	sp	2	2
SO ₃ ²⁻			ion	4	2	trigonal pyramidal	dsp ²	3	1